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Masterarbeit

AI meets BPM: How Artificial Intelligence is changing the BPM game

The fundamental nature of many organizations is rapidly being transformed with the ongoing diffusion of digital technologies. These developments are also challenging the role of BPM. Advances in data analytics and AI, uptake of new technologies (such as Blockchain, Internet of Things, Virtual Reality), increased adoption of cloud and mobile technologies, and new business paradigms open the path for new business processes and new possibilities – or even necessities - for the application of BPM. We see, for example, how automated business process management can be used to tightly link business analytics and business execution in short process-based iterations to follow quickly changing markets, how real-time data from physical entities ('things' in the IoT sense) is directly injected into decision making in business processes, or how agile, IT-reliant business models are directly mapped to executable business processes.

However, the traditional role of BPM in structuring and optimizing (operational) processes often falls short in making use of these opportunities. This can risk the position of BPM to act as the driving force in digital innovation and transformation initiatives. New BPM capabilities that reflect an explorative-dominant (instead of exploitation-dominant) view may help in addressing the emerging opportunities and challenges of digitalization.

Possible research questions for a Master thesis include: Which BPM fields are impacted by AI? **How can AI support BPM applications?** What is the role of BPM in exploiting digital technologies such as AI, IoT or Blockchain?

Empfohlene Einstiegsliteratur:

- Hull R., Motahari Nezhad H.R. (2016) Rethinking BPM in a Cognitive World: Transforming How We Learn and Perform Business Processes. In: La Rosa M., Loos P., Pastor O. (eds) Business Process Management. BPM 2016. Lecture Notes in Computer Science, vol 9850. Springer, Cham
- Veit, F., Geyer-Klingeberg, J., Madrzak, J., Haug, M., & Thomson, J. (2017, September). The Proactive Insights Engine: Process Mining meets Machine Learning and Artificial Intelligence. In BPM (Demos).

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